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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,504	02/11/2002	Bill Christensen	069p2	9093

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EXAMINER

DAVIS, OCTAVIA L

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 03/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/071,504

Applicant(s)

Christensen et al

Examiner

Octavia Davis

Art Unit

2855



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 20-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claims 18 and 19 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

Serial Number: 09/071, 504

Art Unit: 2855

3/3/03

DETAILED ACTION

Election/Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1 - 17 and 20 - 22, drawn to a load sensor assembly, classified in class 73, subclass 795 .
 - II. Claims 18 and 19, drawn to a load sensing system, classified in class 702, subclass 127+.
2. The inventions are distinct, each from the other because of the following reasons: Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, Invention II has separate utility from Invention I such as providing a communication means for transmitting load status information to a remote server, database means associated with said remote server and a web server for displaying said load status information.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. Because these inventions are distinct for the reasons given above and have

acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Larry Kyle on March 3, 2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 1 - 17 and 20 - 22. Affirmation of this election must be made by applicant in replying to this Office action. Claims 18 and 19 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Inventorship

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35

U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 9, 10, 15 and 16 are rejected under 35 U.S.C. 112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention.

Claims 9 and 15, which depend respectively from claims 1 and 11, are drawn to a “method of detecting strain in a structure”. Claims 10 and 16, which depend respectively from claims 1 and 11, are drawn to “a method of sensing the load in a container”. Since independent claims 1 and 11 are drawn to a “load sensor assembly”, claims 9, 10, 15 and 16 are unclear.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in

public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1 - 3, 5 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Harada et al.

Regarding claims 1, 3 and 11, Harada et al disclose a load cell and load detecting apparatus comprising a plate 33 of which includes holes 34 in each of its corners and strain gauges SG1 - SG8 situated on the plate (See Fig. 6) (See Cols. 5 and 6, lines 15 - 45).

Regarding claims 2 and 5, the strain gauges are connected with each other constituting a Wheatstone bridge 21 (See Fig. 2) (See Col. 4, lines 59 - 65).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 4, 6 - 8, 12 - 14, 17 and 20 - 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over in view of.

Regarding claim 4, Harada et al does not disclose the strain gage being centered on the plate. However, Kistler discloses a strain sensor comprising a square plate of which includes a plurality of mounting holes 12 - 18 and strain sensors 66, 68 centered on the plate (See Fig. 1). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify Harada et al according to the teachings of Kistler for the purpose of, measuring the deflection of a centered beam member.

Regarding claims 6 - 8 and 12 - 14, Harada et al does not disclose a cover mounted on the plate to cover standoffs, a printed circuit board and the strain gauge, the cover having corners which lie along lines bisecting the straight sides of the plate. However, Suzuki et al disclose a load cell balance comprising a plate 3 of which includes strain gauges 34 - 37 forming a bridge circuit 32, the gauges being connected to a board 26 via a spacer 29 interposed therebetween and a cover 49 covering the spacer, board and strain gauges (See Fig. 4) (See Cols. 3 - 5, lines 22 - 67, 1 - 26 and 54 - 64). Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify Harada et al according to the teachings of Suzuki et al for the purpose of, providing a firm and stable connection of electric wires to strain gauges.

Regarding claims 17 and 20 - 22, Harada et al does not disclose a digital potentiometer in parallel with the bridge. However, Barnett et al disclose a strain

measuring transducer comprising strain gauges 9 - 12 forming a Wheatstone bridge which is connected to an amplifier circuit of whose output passes through a current meter of which is calibrated to represent the load on the structure. Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify Harada et al according to the teachings of Barnett et al for the purpose of, providing an indication of the strain in the transducer and in the structure.

14. Any inquiry concerning this communication should be directed to Examiner Octavia Davis at telephone number (703) 306 - 5896. The examiner can normally be reached on Monday - Friday (9:00 - 5:00), alternate Mondays off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 - 0956.

OD

OD/2855



MAX NOORI
PRIMARY EXAMINER